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450100-03146**IN THE CLAIMS**

This listing of claims will replace all prior versions, and listings, of claims in the application. An identifier indicating the status of each claim is provided.

**Listing of Claims**

1. (Currently Amended) A data multiplexer for performing time division multiplexing of a ~~bit stream plurality of bit streams~~, said data multiplexer comprising:
  - an extracting means for extracting information necessary for multiplexing processing from ~~said bit stream each of said plurality of bit streams~~;
  - a first calculating means for calculating a time division multiplexing cycle for ~~each of said plurality of bit streams~~, such that a separator ~~may separate separates~~ multiplexed data by a specified method on the basis of said information extracted by said extracting means; and
  - a multiplexing means for performing time division multiplexing of said ~~bit stream plurality of bit streams~~ on the basis of a result calculated by said first calculating means, ~~wherein different multiplexing cycle equations are used to calculate multiplexing cycles of each of said plurality of bit streams.~~
2. (Currently Amended) A The data multiplexer as claimed in claim 1, further including comprising:
  - a second calculating means for calculating a data occupancy rate of a virtual data buffer of said separator,

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wherein said multiplexing means determines an order in which said ~~bit stream is~~  
~~plurality of bit streams are~~ multiplexed on the basis of the data occupancy rate of said  
virtual data buffer calculated by said second calculating means.

3. (Currently Amended) A data multiplexing method for a data multiplexer  
performing time division multiplexing of a ~~bit stream plurality of bit streams~~, said  
method comprising the steps of:

~~an extracting step for extracting information necessary for multiplexing~~  
~~processing from said bit stream each of said plurality of bit streams;~~

~~a calculating step for calculating a time division multiplexing cycle for each of~~  
~~said plurality of bit streams~~, such that a separator ~~may separate separates~~ multiplexed data  
by a specified method on the basis of said information extracted by processing at said  
extracting step; and

~~a multiplexing step for performing time division multiplexing of said bit stream~~  
~~plurality of bit streams~~ on the basis of a result calculated by processing at said calculating  
step,

~~wherein different multiplexing cycle equations are used to calculate multiplexing~~  
~~cycles of each of said plurality of bit streams.~~

4. (Currently Amended) A program for a data multiplexer performing time  
division multiplexing of a bit stream, which is recorded on a recording medium readable  
by a computer, ~~said program comprising the steps of:~~

~~an extracting step for extracting information necessary for multiplexing~~

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processing from ~~said bit stream~~ each of said plurality of bit streams;

~~a calculating step for calculating a time division multiplexing cycle for each of~~  
~~said plurality of bit streams~~, such that a separator ~~may separate~~ separates multiplexed data  
by a specified method on the basis of said information extracted by processing at said  
extracting step; and

~~a multiplexing step for performing time division multiplexing of said bit stream~~  
~~plurality of bit streams~~ on the basis of a result calculated by processing at said calculating  
step,

~~wherein different multiplexing cycle equations are used to calculate multiplexing~~  
~~cycles of each of said plurality of bit streams.~~

5. (New) The data multiplexer as claimed in claim 1, wherein  
a bit stream is a video stream.

6. (New) The data multiplexer as claimed in claim 1, wherein  
a bit stream is an audio stream.

7. (New) The data multiplexer as claimed in claim 1, wherein  
a bit stream is a system data stream.

8. (New) The data multiplexer as claimed in claim 1, wherein  
said specified method is a leak method that is used to transfer said plurality of bit  
streams between buffers.

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9. (New) The data multiplexer as claimed in claim 1, wherein  
said specified method is a vbv-delay method that is used to transfer said plurality  
of bit streams between buffers.

10. (New) The data multiplexer as claimed in claim 1, further comprising:  
an access unit information detector for extracting access unit information; and  
a multiplexing scheduler means for generating schedule information by using said  
access unit information.

11. (New) The data multiplexing method as claimed in claim 3, further  
comprising the steps of:  
extracting access unit information from an access unit information detector; and  
generating schedule information from a multiplexing scheduler means by using  
said access unit information.

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